

24(c) CHECKLIST

STATE: <u>Oregon</u>	SLN No <u>OR90-0009</u>
DATE REGISTERED: <u>4-13-90</u>	90-DAY DATE: <u>7-13-90</u>
SPECIFIC SPECIAL LOCAL NEED: _____	SITE: <u>Carrots / Seed</u>
_____	PEST/PROBLEM: <u>Lygus Bugs, Aphids,</u> <u>Spider Mites</u>

1. Is the State certified to issue this type of registration? Yes
2. Was the EPA Application/Notification Form submitted? Yes
3. Was all the required information included on the form? Yes
4. Was a confidential formula submitted (for new products)? No
5. Is this registration for a "CHANGED USE PATTERN"? NA
6. Has an FR document been prepared for this "CHANGED USE PATTERN"? NA
- Federal Register publication date: _____
7. Tolerances required? NA Established? _____ Citation: _____
8. Full labeling being used? Yes Supplemental directions? Yes
9. Does label state "FOR DISTRIBUTION AND USE ONLY WITHIN (State)"? Yes
10. Does full label comply with 40 CFR 162.10, as follows:
- | | |
|---|------------|
| a. Product name, brand or trademark? | <u>Yes</u> |
| b. Name and address of registrant? | _____ |
| c. Net contents? | _____ |
| d. Product registration number? | _____ |
| e. Producing establishment number? | _____ |
| f. Ingredient statement? | _____ |
| g. Precautionary labeling? | _____ |
| h. Directions for use for special local need? | _____ |
| i. Use classification? | _____ |

Was proper format followed? _____

11. Is supplemental directions for use labeling satisfactory? Yes
12. Was supplemental labeling compared with EPA-registered label? Yes

COMMENTS: _____

263789

CODING FORM FOR SPECIAL LOCAL NEED (24(c)) REGISTRATIONS

1. SLN No. OR 90-0009 2. PM 15 3. Action Code 585

4. State Issue Date

0	4	0	3	9	0
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5. Date received by EPA

0	4	1	8	9	0
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6. Date received by PM

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7. Chemical name _____

8. Chemical code _____

9. Use _____

10. Reviews requested:

	Date Sent	Due Date	Date Returned	Response Code	Response Date
HED					
EFB					
RCB					
EEB					
TB					
RD					
PM					
TSS					
Precaut. Labeling					
Chemistry					
Efficacy					

11. Status _____

12. FINAL ACTION: Response code 35

Response date ~~051190~~
071790

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAY 18 1993

5865389564
381

Mr. Robert A. Mitchell
Agricultural Chemicals Specialist, Plant Division
Oregon Department of Agriculture
635 Capitol Street, NE
Salem, OR 97310-0110

Dear Mr. Mitchell:

Subject: Registration Action under Section 24 (c)
Use of Capture 2EC Insecticide/Miticide on Carrots
Grown for Seed
EPA SLN No. OR-900009
Your Letter Dated November 29, 1990

This will acknowledge receipt of your November 20, 1990 letter and additional information concerning the subject SLN.

We would not object to incorporation of the label revisions you suggest. In addition, in an effort to minimize potential adverse effects to aquatic organisms from use of bifenthrin on carrots grown for seed, we strongly recommend you investigate and incorporate (on the label) safety measures (restrictions) to prevent actual spray drift or runoff contamination such as:

- avoiding or minimizing spray drift to non-target areas by not spraying when wind speed is 10 miles per hour or greater
- addition of buffer zones for aquatic habitats
- prohibition of use during temperature inversions
- reduction in the rate of application and number of applications in one crop season, plus lengthening of intervals between application. No mention was made of the number of applications of bifenthrin permitted in one crop season. Any second applications of bifenthrin before carrot plants bloom will compound the expected residue levels accordingly and could have considerable affect on environmental concentration levels to which non-target organisms are exposed.

CONCURRENCES

SYMBOL								
SURNAME	THIL							
DATE	5/12/93							

The Agency currently considers carrots grown for seed only as a food use. No tolerance exists for residues of bifenthrin in or on carrots and the seeds could be directed to human consumption. Thus, residue data and proposed tolerances are required.

However, as a result of discussions with Grower Associations and State Regulatory Officials, the Agency is willing to consider regulating this use as a non-food use, provided certain restrictions and limitations are in place. This decision is based in part on commitment from the state that mechanisms are in place or could be in place for carrots grown for seed to enforce restrictions necessary to intersect food or feed.

Based on review of the file for OR-900018 (use of Fusilade 2000 Herbicide in Alfalfa grown for seed), it appears that Oregon may have mechanisms in place that could be used to enforce the necessary restrictions for the use of bifenthrin on carrots. If so, the label for this SLN should be revised to reflect those restrictions.

If you have any questions in regard to this letter, please feel free to contact me.

Sincerely,

George T. LaRocca
Product Manager (13)
Insecticide-Rodenticide Branch
Registration Division (H7505C)

cc: Mr. Jeff R. Klundt
Technical Service Rep.
FMC Corporation
2000 Market Street
Philadelphia, PA 19103

DP BARCODE: D160654

MAR 15 1991

C. Branson
TAIS, MP# 903

CASE: 194868
SUBMISSION: S389564

DATA PACKAGE RECORD
BEAN SHEET

DATE: 01/28/91
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: SLN (24C) ACTION: 586 RESUBMISSION
CHEMICAL: 128825 (2-Methyl-1,1'-biphenyl-3-yl)methyl-3-(2-chloro-3,3,3-trif
ID#: OR900009
COMPANY:
PRODUCT MANAGER: 15 GEORGE LARocca 703-557-2400 ROOM: CM#2 204
PM TEAM REVIEWER: THERESA LEMASTER 703-557-4418 ROOM: CM#2 200
RECEIVED DATE: 12/05/90 DUE OUT DATE: 03/05/91

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 160654 EXPEDITE: N DATE SENT: 01/28/91 DATE RET.: / /
DP TYPE: 001 Submission Related Data Package
ADMIN DUE DATE: 02/27/91 CSF: N LABEL: Y
ASSIGNED TO DATE IN DATE OUT
DIV : EFED 01/29/91 03/07/91
BRAN: EEB / /
SECT: / /
REVR : / /
CONTR: / /

* * * DATA PACKAGE REVIEW INSTRUCTIONS * * *

ATTN: ART BUIKEMA
RE: YOUR REVIEW OF SLN NO. OR90009 DATED 06/25/90

PLEASE COMMENT ON THE PROPOSED LABEL REVISIONS
WITH RESPECT TO ENVIRONMENTAL HAZARD STATEMENTS.

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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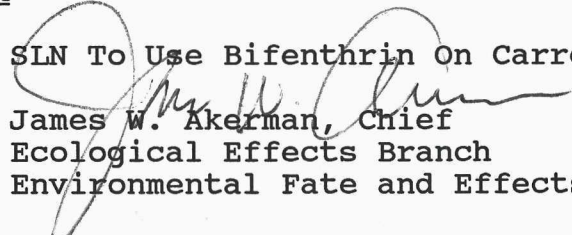
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 15 1991

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM

SUBJECT: SLN To Use Bifenthrin On Carrots Grown For Seed

FROM:  James W. Akerman, Chief
Ecological Effects Branch
Environmental Fate and Effects Division (H-7507-C)

TO: George La Rocca, PM 15
Insecticides and Rodenticides Branch
Registration Division (H-7505-C)

The Ecological Effects Branch (EEB) has been requested to review the proposed label changes for the Special-Local-Need using bifenthrin on carrots grown for seed. According to the Registration Division, this SLN has already been granted. Before addressing the label changes, EEB would like to discuss the toxicity of the chemical.

Since the EEB review dated June 25, 1990, the results of the bifenthrin aquatic field study has been reviewed and analyzed. The results are as follows:

An aquatic field study was conducted during 1986. Post residue monitoring continued through the next two years as well. Bifenthrin was applied at an application rate of 0.1 lb. a.i./A for 10 consecutive weeks starting June 16, 1986 through August 18, 1986. Application was performed by aerial application on 50 acres of cotton. A five meter grass buffer strip was established between the cotton and the pond. Bifenthrin was applied when the wind speed was ≤ 2 mph. The study authors reported that at the time of the first application (June 16, 1986) spray drift inadvertently introduced bifenthrin directly into the pond.

EEB concluded based on the results of the study that the presumption of adverse environmental effects of bifenthrin on aquatic ecosystems had not been negated (EEB Review, 8/31/90). Noted significant adverse effects from exposure to the chemical included:

- More than 1600 gizzard shad died the winter following application; all tested had high concentrations of bifenthrin residues in their tissue. The residues confirm the BCF of greater than 50,000. Other fish species also had pesticide residue in their tissue a year after application.



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- Reduction in condition factor in free-ranging bluegill and caged fathead minnow.
- Mayfly and damselfly disappeared after first application; mayfly remained extremely rare indicating recovery will take longer than one year.
- Severe reduction in chironomid population and elimination of calanoid copepods.
- Reduction in survival and reproductive potential of Daphnia and snails.
- Bifenthrin is extremely persistent- with residues detected for more the a year post application.

EEB completed a cursory review of the exposure of this chemical over 1,165 acres of carrots within Oregon. Dr. Mitchell, in correspondence dated November 29, 1990, indicated all the applications were done with aerial equipment. Therefore, EEB estimated the EEC assuming maximum label rate of 0.1 lb. a.i./A, the number of applications or interval between applications was not specified. Depending on the scenario the EEC ranges from 0.67 ppb to 73.0 ppb, for 6' body of water versus 6" body of water, respectively. See Attachment A. Since the LC50 values are as low as 0.004 ppb for invertebrates and 0.15 ppb for fish, the special review criteria, endangered species criteria, and restricted use criteria are all exceeded.

The results from the laboratory studies support the results seen from the bifenthrin pond study. This chemical is extremely persistent, with a photolytic half-life of 300 days.

EEB expects that the use of bifenthrin in agricultural areas growing carrots for seed would cause serious adverse effects to aquatic organisms.

EEB recommends that the environmental hazard labeling include the following:

This pesticide is toxic to mammals and extremely toxic to fish and aquatic invertebrates. Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes). Drift and runoff from treated areas will be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product

or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Therefore, EEB does not believe that the following label modifications would reduce the exposure so that the concerns would be mitigated:

1. Do not apply Capture when furrow irrigation is in process:
2. Do not spray or allow Capture to drift onto live water in ditches or ponds.

To use this chemical with any irrigation would increase the risk to even higher levels than were estimated with this review. EEB recommends that Oregon Department of Agriculture consider monitoring the residues in the ponds and other bodies of water adjacent to treated fields. This chemical has a significant bioaccumulation potential, therefore, residues in the top 2.5 cm of sediment would most likely be detected. Acute effects are not the only concern that has been identified by EEB. Pyrethroids may also cause more subtle effects on the reproduction of fish, and fish biomass.

In addition, the following data requirements are still outstanding:

not for review | 72-4 Aquatic Invertebrate Life-Cycle Study- submitted Mysid Life Cycle Study, which is currently under review by EEB.

| 72-5 Fish Full Life-Cycle- was to be submitted as of 12/31/90, not yet received by EEB.

If we can be of further assistance, please contact Candy Brassard at 557-1392. Thank you for the opportunity to comment.

Attachment A

EEC Calculation Sheet

I. For aerial application (or mist blower)

A. Runoff

$$\begin{array}{ccccccc} \underline{0.1} \text{ lb(s)} & \times & 0.6 & \times & 0.01 & \times & 10 \text{ (A)} = 0.006 \text{ lb(s)} \\ & & & & \text{(appl.} & \text{(___}\% & \text{(10 A)} \\ \text{(tot.runoff)} & & \text{efficiency)} & \text{runoff} & & \text{(d. basin)} & \end{array}$$

B. Drift

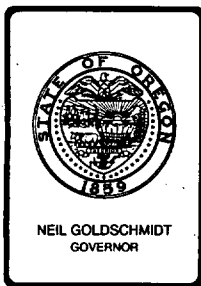
$$\underline{0.1} \text{ lb(s)} \times 0.05 = 0.005 \text{ lb(s)} \quad \text{(tot. drift)} \\ \text{(5\% drift)}$$

For 6 foot water basin

$$\begin{array}{ccccccc} \text{Tot. loading} & = & \underline{0.006 \text{ lb(s)}} & + & \underline{0.005 \text{ lb(s)}} & = & \underline{0.011} \\ \underline{\text{lb(s)}} & & \text{(tot. runoff)} & & \text{(tot.drift)} & & \end{array}$$

$$\begin{array}{l} \text{For 6 feet of water, EEC} = 61\text{ppb} \times 0.011(\text{lbs}) = \\ 0.0671 \text{ ppb} \end{array}$$

$$\text{For 0.5 foot water basin } 734 \text{ ppb} \times 0.1 = 73.4 \text{ ppb}$$



Oregon Department of Agriculture

635 CAPITOL STREET NE, SALEM, OREGON 97310-0110

November 29, 1990

Mr. George T. LaRocca
Product Manager 15-Insecticide-Rodenticide Branch
Registration Division (H7505C)
U.S. Environmental Protection Agency
401 M Street SW
WASHINGTON DC 20460

Dear Mr. LaRocca:

Subject: EPA SLN OR-900009
Capture 2 EC-Carrots Grown For Seed

Re your letter of July 17, 1990, and comments with respect to this use, surveys this past summer indicate approximately 1,165 acres of carrots for seed were treated with Capture. All of the applications were aerial. Ninety-eight percent of the carrot seed acreage was located more than 1 mile from lakes, rivers, or streams; 2% of the fields were 1/2 to 1 mile from water. I am not aware of any adverse reports or damage complaints relating to this use.

Capture efficacy for lygus bugs and mites was reported to be excellent and fieldmen/growers indicated that the pesticide appeared to be "gentle" on predators; the efficacy was such that, compared to previous years, the total pesticide load to carrots was reduced significantly.

Two suggestions for possible label revisions (to heighten awareness of aquatic life) are:

1. Do not apply Capture when furrow irrigation is in process;
2. Do not spray or allow Capture to drift onto live water in ditches or ponds.

In summary, we are pleased with the use and results of this recently issued SLN.

Very truly yours,

Robert A. Mitchell

Robert A. Mitchell
Agricultural Chemicals Specialist
Plant Division
(503) 378-3776

PL/COR/L12/vb

JUL 17 1990

Mr. Robert A. Mitchell
Oregon Department of Agriculture
635 Capitol St., NE
Salem, OR 97310-0110

585 / 263789
38 / 1

Dear Mr. Mitchell:

Subject: Registration Action under Section 24 (c)
Carrots Grown for Seed
EPA SLN No. OR90-0009

This will acknowledge receipt of your notification of April 3, 1990 to this Agency of a registration, pursuant to section 24 (c) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, as follows:

Product:	CAPTURE 2EC (Bifenthrin)
EPA Registration Number:	279-3069
24 (c) Registrant:	FMC Corporation 2000 Market Street Philadelphia, PA 19103

We have completed an incremental risk assessment with respect to the proposed special local need use on carrots and have the following comments:

The potential for application of bifenthrin to relatively large acreage, the potential for repeat applications, and the extreme toxicity of bifenthrin to aquatic organisms, indicate a high probability for adverse impact to non-target species. In order to complete a risk assessment (for aquatic organisms) for all registered and pending uses, the following data have been required:

1. An aquatic invertebrate life-cycle test.
2. A finfish life-cycle (reproduction) toxicity test.
3. Simulated (mesocosm) and/or actual aquatic field study.

This data has been received and is currently under review. Until the Agency completes its review it cannot determine the actual impact of additional uses of bifenthrin on aquatic life forms nor approve such uses for Section 3 registrations at this time.

LeMaster 7/17/90

If the State maintains the subject SLN, we would be interested in your Department's assessment of our concerns with respect to potential environmental hazard to aquatic organisms and any preventative/remedial measures taken to minimize exposure.

If you have any questions in regard to this letter, please feel free to contact me.

Sincerely,

George T. LaRocca
Product Manager (15)
Insecticide-Rodenticide Branch
Registration Division (H7505C)

cc: Jeff R. Klundt
FMC Corporation
2000 Market Street
Philadelphia, PA 19103

Code 777

RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms.

For retail sale to and use only by certified applicators, or persons under their direct supervision and only for the uses covered by the certified applicator's certification.

Net Contents

Capture® 2 EC

Insecticide/Miticide

EPA Reg. No. 279-3069

EPA Est. 279-

Active Ingredient:

By Wt.

Bifenthrin: (2 methyl[1,1'-biphenyl]-3-yl)

methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-

2,2-dimethyl-cyclopropanecarboxylate* 25.1%

Inert Ingredients:** 74.9%

100.00%

*Cis isomers 97% minimum, trans isomers 3% maximum.
Contains xylene range aromatic solvents.

This product contains 2 pounds active ingredient per gallon.

U.S. Patent No. 4,238,505

KEEP OUT OF REACH OF CHILDREN WARNING

This label must be in the possession of the user at the time of application.

STATEMENT OF PRACTICAL TREATMENT

If Swallowed: Get medical attention. Call a Poison Control Center or physician promptly for advice. Describe Precautionary Statements and Note to Physician on the label. Do not induce vomiting unless advised by a physician or qualified medical advisor. Do not give anything by mouth to an unconscious person.

If Inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

If on Skin: Wash with plenty of soap and water. Get medical attention.

If in Eyes: Flush with plenty of water. Call a physician if irritation persists.

Note to Physician:

Pesticide Hotline (800) 858-7378. This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

For Emergency Assistance call 716-735-3765

See other panels for additional precautionary information.

FMC

FMC Corporation
Agricultural Chemical Group
Philadelphia PA 19103

589

NOT REVIEWED

In Accordance with PR Notice 82 2

Base on Draft Labeling Dated 1/31/89

PRECAUTIONARY STATEMENTS Hazards to Humans (and Domestic Animals)

Warning

May be fatal if swallowed. Harmful if inhaled, or absorbed through skin. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash contaminated clothing before reuse.

Applicators must wear long sleeve shirt and trousers. Mixers and loaders must wear long sleeve shirt, trousers, chemical resistant gloves, and goggles or face shield.

Environmental Hazards

This pesticide is extremely toxic to fish and aquatic invertebrates. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes). Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift while bees are actively visiting the treatment area.

Physical/Chemical Hazards

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Reentry Statements

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for crops treated with this product, consult your State Department of Agriculture for further information.

Chemigation Use Directions

Apply this product only through sprinkler including center pivot, lateral move, end tcw, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

Crop injury, lack of effectiveness, or illegal residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

*Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Capture* 2 EC insecticide/miticide should be applied continuously for the duration of the water application. Capture 2 EC should be diluted in sufficient volume to insure accurate application over the area to be treated. When using chemigation, a minimum of 0.5 inch per acre of irrigation water is recommended. Agitation is not required when a suitable diluent is used.

STORAGE AND DISPOSAL

Pesticide Storage

Do not freeze. Do not store below 40° F. If crystals are observed, warm material to above 60° F by placing container in warm location. Shake or roll container periodically to redissolve solids.

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC collect: (716) 735-3765.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Do not use contents.

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal

Metal or Plastic Container: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Do not cut or weld metal containers.

U-Turn* Container: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

ENDANGERED SPECIES RESTRICTIONS

This product may pose a hazard to endangered aquatic species. Do not apply this product within 100 yards of aquatic habitat in the following counties:

Alabama
Colbert, Greene, Jackson, Lamar, Lauderdale, Limestone, Madison, Marshall, Morgan, Pickens and Sumter

Arizona
Graham, Maricopa, Mohave, Pima, Pinal and Santa Cruz

Arkansas
Benton, Clay, Clark, Cross, Lawrence, Lee, Poinsette, Polk, Randolph, Sharp and St. Francis

California
Butte, Colusa, Glenn, Imperial, Kern, Merced, Modoc, Riverside, Sacramento, Solano, Sutter, Tehama and Yolo

Florida
Broward, Dade, Glades and Palm Beach

Kentucky
Ballard, Butler, Edmundson, Green, Hart, Jackson, Laurel, Livingston, Marshall, McCracken, McCreary, Pulaski, Rockcastle, Taylor, Warren and Wayne

Mississippi
Claiborne, Copiah, Hinds, Itawamba, Lowndes, Monroe and Noxubee

Missouri
Barry, Benton, Camden, Christian, Dallas, Greene, Hickory, Jasper, Lawrence, Miller, Newton, Osage, Polk, St. Clair, Stone and Webster

Nevada
Clark

New Mexico
Chaves, DeBaca and Eddy

North Carolina
Edgecombe, Nash and Pitt

Ohio
Pickaway

Oklahoma
Delaware, McCurtain and Pushmataha

Oregon

Lake

Tennessee

Bedford, Blount, Claiborne, Decatur, Franklin, Hancock, Hardin, Hickman, Knox, Lawrence, Lincoln, Loudon, Marshall, Maury, Meigs, Monroe, Rhea, Roane, Scott, Sequatchie, Smith, Sullivan and Wayne

Texas

Basstrop, Burleson, Comal, Harris, Hays, Jeff Davis, Pecos and Reeves

Utah

Utah and Washington

Virginia

Lee, Russell, Scott, Smyth, Tazewell, Washington and Wise

Special Equipment

Capture 2 EC should be mixed and loaded using systems that comply with accepted standards that identify a closed mixing-loading system. That system should be designed and operated in such a manner to minimize human exposure to the formulated product or the mixed spray solution of Capture. Follow State directions for closed systems. For more details, contact your State Extension Service.

Application Instructions

Rate of application is variable according to pest pressure, timing of sprays, and field scouting. Use lower rates under light to moderate infestations; higher rates under heavy insect pressure and for mite control. Arid climates generally require higher rates.

Crop	Pest	Dosage		Remarks
		Pound Active Per Acre	Ounces 2 EC Per Acre	
Cotton	European Corn Borer	0.02-0.1	1.3-5.4	Capture 2 EC may be applied in water or refined vegetable oil (soybean/cottonseed).
	Soybean (Banded) Thrips			Application in Water: Apply in a minimum of 5 gallons per acre with ground equipment or 1 gallon per acre by aircraft. When applying by air, 1 quart of emulsified oil may be substituted for one quart of water in the finished spray.
	Tobacco Thrips	0.04-0.1	2.6-5.4	ULV Application: Apply the recommended rate of Capture 2 EC in refined vegetable oil in a minimum of 1 quart of finished spray per acre with aircraft calibrated to give adequate coverage.
	Bolt Weevil			To Control Bolt Weevil: Apply Capture 2 EC at an interval of 3 to 4 days until pest numbers are reduced to acceptable levels.
	Bollworm	0.06-0.1	3.8-6.4	To Control Mites and Aphids: Apply when pests first appear. Repeat as necessary to maintain control. Higher rates will be required once a damaging threshold is established.
	Cabbage Looper			
	Cotton Aphid			
	Cotton Fleahopper			
	Cotton			
	Leafperforator			
	Cutworms			
	Fall Armyworm			
	Lygus Spp.			
	Plant Bugs			
	Saltmarsh			
	Caterpillar			
	Southern Garden			
	Leafhopper			
	Stink Bugs			
	Tobacco Budworm			
	Whitefly			
	Yellow Striped			
	Armyworm			
	Carmine Spider Mite			
	Twospotted Spider			
	Mite			
	Beet Armyworm			
	Pink Bollworm			

Do not apply more than 0.5 pound active per acre per season.

Do not apply within 14 days of harvest.

Do not graze livestock in treated areas or cut treated crops for feed.

Rotational Crops

Rotational crops may be planted no sooner than 30 days after last application. Straw may not be used for food or feed.

Tank-Mixture

Capture 2 EC insecticide/miticide may be applied in tank-mixtures with other products approved for use on cotton. Observe all restrictions and precautions which appear on the labels of these products.

Dealers Should Sell in Original Packages Only.

Terms of Sale or Use: On purchase of this product buyer and user agree to the following conditions:

Warranty: FMC makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

Directions and Recommendations: Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by the buyer at his own risk.

Use of Product: FMC's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

Damages: Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.

Capture® 2 EC

Insecticide/Miticide

RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms.
For retail sale to and use only by certified applicators, or persons under their direct supervision and only for the uses covered by the certified applicator's certification.

EPA Reg. No. 279-3069

FOR USE AND DISTRIBUTION ONLY WITHIN OREGON

EPA SLN NO. OR-90 0009

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

CROP: CARROTS GROWN FOR SEED (HYBRID OR OPEN POLLINATED)

PESTS: LYGUS BUGS, APHIDS, AND SPIDER MITES

DIRECTIONS FOR USE:

To control Lygus Bugs, Aphids and Spider Mites apply Capture 2 EC at the rate of 3.9 to 6.4 ounces per acre (0.06 to 0.1 pound active ingredient). Apply in a minimum of 8 gallons of water per acre by air or in a minimum of 20 gallons of water per acre by ground.

Capture 2 EC may be used only in the prebloom or post-bloom period. Bees, used for pollination, should not be introduced into the field within 5 days of the prebloom application. Bees, used for pollination, must be removed from the field before a post-bloom application is made.

SPECIAL EQUIPMENT:

Capture 2EC should be mixed and loaded using systems that comply with accepted standards that identify a closed mixing-loading system. That system should be designed and operated in such a manner to minimize human exposure to the formulated product or the mixed spray solution of Capture. Follow State directions for closed systems. For more details, contact the State Extension Service.

RESTRICTIONS:

- 1) For use only on fields of Carrots grown for seed that are controlled by either Round Butte Seed Growers or Central Oregon Seed, Inc., and located in Jefferson, Deschutes, Crook, or Wasco Counties of Oregon.
- 2) For use only on fields in the production of Carrot Grown for Seed. Not for use on fields producing Carrots for food. No portion of the treated field, including seed, seed screenings, hay, forage or stubble, may be used for human or animal feed.
- 3) Producers of Carrot Grown for Seed who use Capture 2 EC, or cause the product to be used on fields they operate, are required to inform, in writing, conditioners receiving seed produced on treated fields of the product's use. A copy of this labeling is required to be provided to the conditioner by the producer.
- 4) Use of Capture 2 EC according to this labeling is deemed a non-food use.
- 5) Do not apply Capture 2 EC or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.
- 6) All Carrot Grown for Seed treated with Capture 2 EC is to be tagged at the Conditioning Plant "Not for human or animal consumption".

ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA REGISTERED LABEL ARE TO BE FOLLOWED. REFER TO THE EPA REGISTERED LABEL FOR INFORMATION ON CHEMIGATION.

THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF PESTICIDE APPLICATION.

FMC CORPORATION

Agricultural Chemical Group

P.O. Box 1669

Fresno, CA 93717

24(c) Registrant:

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FMC

Code 777

Use this form for individual studies & to submit pesticide applications.



United States Environmental Protection Agency
Office of Pesticide Programs
Washington, DC 20460
Data Review Record
Confidential Business Information - Does not contain
National Security Information (E.O. 12065)

Pack Number
50549
Date Received
5-16-90

1. Product Name **CAPTURE ZEC** Chemical Name **BIFENTHIN**

2. Identifying Number	3. Record Number	4. Action Code	5. MRID/ Accession Number	6. Study Guideline or Narrative
39-3069 OR 90-0009	263789	585		

7. Reference No. **1** 8. Date Rec'd (EPA) **4/18/90** 9. Prod/Review Mgr/DCI **Lafocca/02** 10. PM/RM Team No. **15** 11. Date to HED/ EFED/RD/BEAD **5/11/90** 12. Proj Return Date **6/14/90** 13. Date Returned to RD/SRRD **7/3/90**

Instructions

This Section Applies to Review of Studies Only

14. Check Applicable Box
☐ Adverse 6(a)(2) Data (405) ☐ Generic Data (Reregistration)(660)
☐ Special Review Data (870) ☐ Product Specific Data (Reregistration)(655)
 15. No. of Individual Studies Submitted
 16. Have any of the above studies (in whole or in part) been previously submitted for review?
☐ Yes (Please identify the study(ies)) ☐ No
 17. Related Actions

18.	To	Type of Review	19. Reviews Also Sent to	20. Data Review Criteria
HED		Science Analysis & Coordination	<input type="checkbox"/> SAC <input type="checkbox"/> PC	A. Policy Note No. 31 <input type="checkbox"/> 1 = data which meet 6(a)(2) or meet 3(c)(2)(B) flagging criteria <input type="checkbox"/> 2 = data of particular concern from registration standard <input type="checkbox"/> 3 = data necessary to determine tiered testing requirements
		Toxicology/HFA	<input type="checkbox"/> TOX/HFA <input type="checkbox"/> PL	
		Toxicology/IR	<input type="checkbox"/> TOX/IR	
		Dietary Exposure	<input type="checkbox"/> DEB <input type="checkbox"/> EA	
		Nondietary Exposure	<input type="checkbox"/> NDE <input type="checkbox"/> AC <input type="checkbox"/> BA	
EFED	<input checked="" type="checkbox"/>	Ecological Effects	<input type="checkbox"/> EEB	B. Section 18 <input type="checkbox"/> 1 = data in support of section 3 in lieu of section 18 C. Inert Ingredients <input type="checkbox"/> 1 = data in support of continued use of List 1 inert
		Environmental Fate & Groundwater	<input type="checkbox"/> EFGWB	
SRRD		Special Review	<input type="checkbox"/> SR	
		Reregistration	<input type="checkbox"/> RER	
		Generic Chemical Support	<input type="checkbox"/> GSC	
RD		Insecticide-Rodenticide	<input type="checkbox"/> IR	
		Fungicide-Herbicide	<input type="checkbox"/> FH	
		Antimicrobial	<input type="checkbox"/> AM	
		Product Chemistry		
BEAD		Precautionary Labeling		
		Economic Analysis		
		Analytical Chemistry		
		Biological Analysis		

☐ Confidential Statement of Formula (EPA Form 8570-4) Attached (Trade Secrets) ☒ Label Attached

ROUTING AND TRANSMITTAL SLIP

Date

6-26

TO: (Name, office symbol, room number,
building, Agency/Post)

Initials

Date

1.

Ray Matheny

2.

Jim H Kerman

3.

Doug Urban

4.

Art

5.

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

Bifenthrin
24c Oregon
pests on cucurbit grown for
seeds.

Art

DO NOT use this form as a RECORD of approvals, concurrences, disposals,
clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)

Room No.—Bldg.

Phone No.

5041-102

GPO : 1987 O - 196-409

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

263789
RECORD NUMBER

128825
SHAUGHNESSY NO.

REVIEW NO. _____

EEB REVIEW

DATE: IN 5/18/90

DATE: OUT _____

FILE OR REG. NO. OR-90-0009

PETITION OR EXP. NO. _____

DATE OF SUBMISSION 4/18/90

DATE RECEIVED BY EFED 5/16/90

RD REQUESTED COMPLETION DATE 6/14/90

EEB ESTIMATED COMPLETION DATE 6/14/90

RD ACTION CODE 585

TYPE OF PRODUCT(S) : I,D,H,F,N,R,S Synthetic Pyrethroid

DATA ACCESSION NO(S). _____

PRODUCT MANAGER (NO.) PM (15)

PRODUCT NAME(S) Capture 2EC (bifenthrin)

COMPANY NAME Oregon Department of Agriculture

SUBMISSION PURPOSE Sec 24(c) - use on carrots grown for seed

SHAUGHNESSY NO.

CHEMICAL & FORMULATION(S)

% A.I.

bifenthrin

EEB REVIEW

BIFENTHRIN

100 SUBMISSION PURPOSE AND LABEL INFORMATION

100.1 Submission Purpose and Pesticide Use

The Oregon Department of Agriculture submitted an application for registration of bifenthrin (as Capture 2EC) for control of lygus bugs, aphids and spider mites on carrots grown for seed. Registration issued by Oregon on April 3, 1990.

100.2 Formulation Information

Capture 2EC

bifenthrin.....	25.1%
inert ingredient.....	74.9%

100.3 Application Methods, Direction and Rates

Refer to supplemental label for details. The proposed label permits rates of 0.06 to 1.0 lbs a.i./acre/treatment. No information was presented on number of applications or amount of acreage to be treated.

100.4 Target Organisms

For control of lygus bugs, aphids and spider mites on carrots grown for seed.

100.5 Precautionary Labeling

Environmental Hazard

"This pesticide is extremely toxic to fish and aquatic invertebrates. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes). Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops and weeds. Do not apply this product or allow it to drift while bees are actively visiting the treatment area."

100.6 Nature and Scope of Request

According to the letter from the Oregon Department of Agriculture to EPA, the "Insecticides available for pest control in carrots grown for seed are limited." According to the Crop protection Chemicals Reference (1986, 2nd ed.), at least 6 other chemicals were registered for control of the pests listed in the application.

101 HAZARD ASSESSMENT

101.1 Discussion

Bifenthrin is currently registered for use on greenhouse (in-house) ornamentals and cotton. The proposed use is for control of pests of carrots grown for seed. The requested use is for four counties: Crook, Wasco, Jefferson and Dechutes on land operated by either Round Butte Seed Growers or Central Oregon Seed, Inc.

The proposed label permits rates of 0.06 to 1.0 lbs a.i./acre/treatment. No information was provided on the number of acres to be treated or the number of applications.

101.2 Environmental Fate

Foliar half-life data are not available. This information may be important to understanding the potential effects of bifenthrin to non-target organisms. Bifenthrin is considered stable under environmental conditions; it was resistant to hydrolysis after 22 day exposure to pHs of 5, 7 and 9 units. The hydrolytic half-life is estimated to be > 52 weeks. The photolytic half-life in unbuffered water is estimated to be between 209 and 300 days. Soil half-life ranges from 97 to 250 days for different soil types. Mobility of chemical is low in soils with 1.3% organic matter; immobile when organic content > 2.0%.

Because of its persistence and repeated application, bifenthrin residue levels are expected to be maintained for prolonged periods of time at concentrations that will significantly and adversely affect non-target organisms.

Likelihood of Adverse Effects on Nontarget OrganismsTerrestrial or Avian Vertebrates

There are no direct acute toxicity concerns for avifauna or other terrestrial vertebrates, but concern is raised for possible chronic effects.

Bifenthrin is characterized as slightly toxic to birds. The LD50 to bobwhite quail and mallard duck are 1,800 and > 2,150 mg/kg, respectively. The dietary LC50s for the bobwhite quail and mallard duck are 4,450 and 1,280 ppm, respectively. Bobwhite reproduction was not affected at concentrations \leq 75 ppm; however, an increased incidence of egg breakage was noted at 50 and 75 ppm. Mallard duck reproduction was also not affected at concentrations \leq 75 ppm; possible dose response effects were noted with the number of eggs laid, eggs hatched and number of survivors after 14-d.

Bifenthrin is highly to moderately toxic on an acute oral basis to rats; average LD50 for both sexes was 54.5 mg/kg. The LC50 for rats exposed to bifenthrin technical is estimated to be 545 ppm.

Based on the estimated exposure and the available acute and chronic avian toxicity data, bifenthrin is not expected to pose a direct or dietary hazard to avian wildlife. Because of the extreme toxicity to aquatic organisms, potential indirect effects, i.e., by adversely affecting food organisms, are expected for waterfowl that use prairie potholes, small ponds, marshes or other wetlands as feeding grounds.

Use of bifenthrin is not expected to pose a direct or dietary hazard to mammalian wildlife.

Aquatic Species

Bifenthrin is extremely toxic to aquatic organisms. Mortality has been demonstrated in both field and laboratory studies. Information submitted under Section 6(a)(2) report reductions of aquatic invertebrates and gizzard shad under field use patterns.

The freshwater acute toxicity values for Daphnia, bluegill, rainbow trout, and fathead minnow are 1.6, 0.18, 0.10, and 0.21 ppb, respectively. The freshwater chronic NOEL values for Daphnia (21-d) and fathead minnow life cycle are 0.0013 and 0.040 ppb, respectively.

Aquatic organisms are especially sensitive and would be substantially harmed by exposure to bifenthrin which would result from off-target transport. Aquatic species will be exposed to bifenthrin in two ways: runoff and spray drift. Exposure from runoff is expected to exceed laboratory demonstrated effect concentrations even though bifenthrin has a high binding affinity for soils.

A SWRRB-EXAMS model calculation performed by EAB reports concentrations of 0.004 ppb in the water and 16.7 ppb on water-borne sediment particles. The model was based on a cotton use and though different conditions exist between corn and cotton, the per application use rate is approximately the same.

Direct application of bifenthrin (at an average of 0.08 lbs a.i./acre) into 6 inches of water result in a water concentration of 58.85 ppb and 4.9 ppb in 6 ft of water. Because of the persistence of bifenthrin higher concentrations in water would be expected from multiple applications. For a drift rate of 5%, the estimated environmental concentration from a single application would be 2.93 ppb in 6 inches of water and 0.244 ppb in 6 ft of water.

Bifenthrin is extremely persistent in the environment. A potential chronic hazard to aquatic life may occur. The estimated environmental concentrations may exceed the acute and NOEC levels for invertebrates and fish.

A significant problem with bifenthrin is that there is no fully validated method to measure the low concentrations of bifenthrin in the environment which affect aquatic organisms; these low concentrations are at or below the level of detection. Because concentrations that may cause adverse effects to aquatic organisms can not be measured, any efforts by EEB to confirm cause-and-effect relationships required for taking regulatory actions will be disabled. Further, the research conducted by the Agency (Dr. Frank Stay, EPA-Duluth, pers. comm.), suggests that toxicity of a synthetic pyrethroid to benthic organisms may occur long after the chemical could not be detected in the water column. The route of entry/exposure of these organisms is not known.

Further, when adsorbed onto the surface of particulate matter, such as in runoff, it has been assumed that synthetic pyrethroids are not bioavailable. Because synthetic pyrethroids bind to soil and organic particles does not mean that the pyrethroids may not be available to biota over a long period of time. In research conducted by the Agency (Dr. Frank Stay, pers. comm.), toxicity of a

synthetic pyrethroid to benthic organisms was noted long after the chemical could not be detected in the water column.

Bioconcentration

Octanol/water coefficient is $> 1 \times 10^6$. Considering that two applications are possible, residues will not only persist, but will accumulate. Bioaccumulation data are needed because the organisms in a previous study did not achieve a body burden plateau after 42 days exposure. The whole fish bioconcentration factor (BCF) was as high as 8720X after 42 days; only an average of 47% of the bifenthrin was depurated after 42 days post-exposure.

101.4 Endangered Species Consideration

No endangered species are found in the four county area mentioned in this request. A 300 ft buffer has been proposed in areas where there are endangered aquatic species; this is inconsistent with labels provided for bifenthrin use in other areas of the United States.

EEB defers to the FWS opinion that the proposed buffers are sufficient to protect endangered species.

101.5 Adequacy of Toxicity Data

The following studies are required under 40 CFR Part 158 to support the use of bifenthrin where it may enter freshwater:

1. Finfish life-cycle (reproduction) toxicity test: § 72-5 (a submitted fathead minnow life-cycle test was determined to be unacceptable).
2. Aquatic organism bioaccumulation: §72-6 (reserved pending review of bluegill dynamic flow-through bioaccumulation test and the aquatic field test).
3. Simulated aquatic field test: §72-7 (received and in review)

It is EEB's contention that the available data are sufficient to allow the conclusion that the outdoor use of bifenthrin will have serious effects on non-target organisms, especially in aquatic environments. These remaining studies are required for registration and will help clarify EEB's position regarding bifenthrin use.

101.6 Adequacy of Labeling

Because of the extreme toxicity EEB feels that the data do not support this request. Consequently, no recommendations for changes in labeling have been proposed even though the proposed label is inadequate.

102 CLASSIFICATION

Bifenthrin is extremely toxic to aquatic life. The criteria for triggering regulatory actions are part of the "weight of the evidence" used by the Agency to determine potential impacts to the environment. The calculations made by the Agency to classify a chemical at risk for aquatic endangered species (Urban and Cook 1986. Ecological Risk Assessment, EPA-540/9-85-001) indicate that bifenthrin exceed the criteria established for ENDANGERED SPECIES RISK CLASSIFICATION, RESTRICTED USE CLASSIFICATION and SPECIAL REVIEW.

103 CONCLUSIONS

EEB has reviewed the request for Capture 2EC use on carrots grown for seed. Under the presumed use of this chemical, the probability of an effect should be minor.

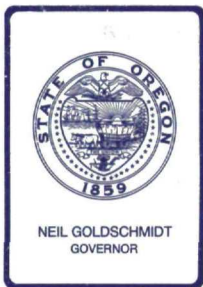
However, based on available data, EEB concludes that use of bifenthrin provides for serious risks to non-target organisms. Serious impacts to aquatic organisms may occur. The greatest problems foreseen with bifenthrin are its extreme toxicity to aquatic organisms, its persistence in the environment, and its potential to bioaccumulate.

Two documentations of possible unreasonable adverse effects due to bifenthrin use has been received by EPA (Section 6 (a) (2)). Reductions of aquatic invertebrate populations and gizzard shad fish mortalities under field use patterns have been reported.

Arthur L. Buikema, Jr. 6/25/90
Arthur L. Buikema, Jr., PhD., Aquatic Ecologist
Ecological Effects Branch
Environmental Fate and Effects Division (H-7507-C)

Raymond W. Matheny 6/26/90
Ray Matheny, Head - Section I
Ecological Effects Branch
Environmental Fate and Effects Division (H-7507-C)

James Akerman 6/28/90
James Akerman, Chief
Ecological Effects Branch
Environmental Fate and Effects Division (H-7507-C)



Oregon Department of Agriculture

635 CAPITOL STREET NE, SALEM, OREGON 97310-0110

April 3, 1990

Ms. Ferial S. Bishop, Chief
Document Processing Desk (SLN)
Office of Pesticide Programs-Registration Div. (H7505C)
U.S. Environmental Protection Agency
401 M Street (SW)
WASHINGTON DC 20460

We are pleased to enclose application for registration of the following pesticide under Section 24(c).

FMC Corporation, Capture 2EC, EPA Registration No. 279-3069, EPA SLN No. OR-900009.

This application was passed through Oregon registration April 3, 1990, and allows the use of Capture 2EC for control of lygus bugs, aphids and spider mites on carrots grown for seed. Dr. Glenn Fisher of Oregon State University has reviewed this application and supports registration.

Insecticides available for pest control in carrots grown for seed are limited. Representatives from the carrot seed conditioners have requested that FMC pursue this label use because of the critical need for an effective insecticide for this crop. This label is for use on fields of carrots grown for seed that are controlled by either Round Butte Seed Growers (RBSG) or Central Oregon Seed, Inc. (COSI). Both companies have assured the Oregon Department of Agriculture in writing that seed screenings will not be used for feed purposes.

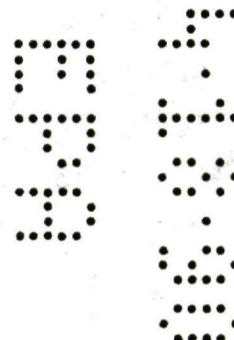
For these reasons, we feel justified in granting this 24(c) registration.

Robert A. Mitchell

Robert A. Mitchell
Agricultural Chemicals Specialist
Plant Division
(503) 378-3776

X3/dhpl
Enclosure

cc: Oregon State University
PLIRS
OSDA Registration File
SLN File
Jon Heller, EPA X
Jeff Klundt
Glenn Fisher
Central Oregon Seeds, Inc.
Round Butte Seed Growers, Inc.





United States Environmental Protection Agency
Office of Pesticide Programs
Registration Division (TS-767)
Washington, DC 20460

**Application for/Notification of State Registration
of a Pesticide To Meet a Special Local Need**
(Pursuant to Section 24(C) of the Federal Insecticide,
Fungicide, and Rodenticide Act, as Amended)

For State Use Only
Registration No. Assigned
OR-900009
Date Registration Issued
April 3, 1990

1. Name and Address of Applicant for Registration FMC CORPORATION 2000 MARKET STREET PHILADELPHIA, PA 19103		2. Product Is (Check one) EPA-Registered <input checked="" type="checkbox"/> EPA Registration Number 279-3069 New (not EPA-registered) <input type="checkbox"/> Attach EPA Form 8570-4, Certified Statement of Formula, for new products. EPA Company Number 279	
4. Product Name CAPTURE 2 EC INSECTICIDE/MITICIDE		3. Active Ingredient(s) in Product BIFENTHRIN	
6. Type of Registration (Give details in Item 12 or on a separate page, properly identified and attached to this form): a. To permit use of a new product. <input checked="" type="checkbox"/> b. To amend EPA registrations for one or more of the following purposes: <input checked="" type="checkbox"/> (1) To permit use on additional crops or animals. <input checked="" type="checkbox"/> (2) To permit use at additional sites. <input type="checkbox"/> (3) To permit use against additional pests. <input type="checkbox"/> (4) To permit use of additional application techniques or equipment. <input type="checkbox"/> (5) To permit use at different application rates. <input type="checkbox"/> (6) Other (specify below)		5. If this is a food/feed use, a tolerance or other residue clearance is required. Cite appropriate regulations in 40 CFR Part 180, 21 CFR Part 193, and/or 21 CFR Part 561. NON-FEED NON-FOOD	
10. Has a FIFRA Section 24(C) registration for this use of the product ever, by another State been (Check applicable box(es)) <input checked="" type="checkbox"/> Sought <input checked="" type="checkbox"/> Issued <input type="checkbox"/> Denied <input type="checkbox"/> Revoked If any of the above are checked, list States in Item 12 below. <input type="checkbox"/> No FIFRA Section 24(C) Action		7. Nature of Special Local Need (Check one) a. <input type="checkbox"/> There is no pesticide product registered by EPA for such use. b. <input checked="" type="checkbox"/> There is no EPA-registered pesticide product which, under the conditions of use within the State, would be as safe and/or as efficacious for such use within the terms and conditions of EPA registration. c. <input type="checkbox"/> An appropriate EPA-registered pesticide product is not available.	
11. Endangered Species Act: (Give details in Item 12 or on a separate page, properly identified and attached to this form) Identify the counties where this pesticide will be used. If Statewide, indicate "all." Provide a list of Federally protected endangered/threatened species which occur in the areas of proposed use.		8. If this registration is an amendment to an EPA-registered product, is it for a "changed use pattern" as defined in 40 CFR 162.3(k)? <input type="checkbox"/> Yes (discuss in Item 12 below) <input checked="" type="checkbox"/> No	
12. Comments ITEM 6. CAPTURE 2 EC WILL ONLY BE USED ON NON-FOOD CARROT SEED PLANT RESIDUE AND SCREENINGS WILL NOT BE USED FOR FEED OR FOOD. ITEM 10. WA-900001 ITEM 11. CAPTURE 2 EC WILL BE USED ONLY ON CARROT SEED GROWN IN CROOK, WASCO, JEFFERSON, AND DESCHUTES COUNTIES OF OREGON, THE FEDERAL LABEL DOES NOT IDENTIFY ANY ENDANGERED SPECIES IN THESE COUNTIES.		9. Has an EPA Registration or Experimental Use Permit for Use of this chemical ever been: (Check applicable box(es)) <input checked="" type="checkbox"/> Sought <input checked="" type="checkbox"/> Issued <input checked="" type="checkbox"/> Denied <input type="checkbox"/> Canceled <input type="checkbox"/> Suspended Previous Permit Action: <input checked="" type="checkbox"/> Registration <input checked="" type="checkbox"/> Experimental Use Permit <input type="checkbox"/> No Previous Permit Action	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. Signature of Applicant or Authorized Representative JEFF R. KLUNDT Title TECHNICAL SERVICE REP. Telephone Number 509-529-5950 Date 3/9/90			
Determination by State Agency This registration is for a Special Local Need and is being issued in accordance with section 24(c) of FIFRA, as amended. To the best of our knowledge, the information above is correct, except as noted in "Comments" below or in attachments.			
Name, Title, and Address of State Agency Official Robert A. Mitchell Oregon Department of Agriculture 635 Capitol St. NE Salem OR 97310-0110 Title Agricultural Chemicals Specialist Telephone Number (503) 378-3776 Date 4/3/90		Comments (by State Agency Only) For use only on carrot seed fields controlled by Round butte Seed Growers or Central Oregon Seed Inc. in Jefferson, Deschutes, Crook or Wasco Counties of Oregon.	
		Received by EPA 	

Capture® 2 EC

Insecticide/Miticide

RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms.
For retail sale to and use only by certified applicators, or persons under their direct supervision and only for the uses covered by the certified applicator's certification.

EPA Reg. No. 279-3069

FOR USE AND DISTRIBUTION ONLY WITHIN OREGON

EPA SLN NO. OR-90 0009

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

CROP: CARROTS GROWN FOR SEED (HYBRID OR OPEN POLLINATED)

PESTS: LYGUS BUGS, APHIDS, AND SPIDER MITES

DIRECTIONS FOR USE:

To control Lygus Bugs, Aphids and Spider Mites apply Capture 2 EC at the rate of 3.9 to 6.4 ounces per acre (0.06 to 0.1 pound active ingredient). Apply in a minimum of 8 gallons of water per acre by air or in a minimum of 20 gallons of water per acre by ground.

Capture 2 EC may be used only in the prebloom or post-bloom period. Bees, used for pollination, should not be introduced into the field within 5 days of the prebloom application. Bees, used for pollination, must be removed from the field before a post-bloom application is made.

SPECIAL EQUIPMENT:

Capture 2EC should be mixed and loaded using systems that comply with accepted standards that identify a closed mixing-loading system. That system should be designed and operated in such a manner to minimize human exposure to the formulated product or the mixed spray solution of Capture. Follow State directions for closed systems. For more details, contact the State Extension Service.

RESTRICTIONS:

- 1) For use only on fields of Carrots grown for seed that are controlled by either Round Butte Seed Growers or Central Oregon Seed, Inc., and located in Jefferson, Deschutes, Crook, or Wasco Counties of Oregon.
- 2) For use only on fields in the production of Carrot Grown for Seed. Not for use on fields producing Carrots for food. No portion of the treated field, including seed, seed screenings, hay, forage or stubble, may be used for human or animal feed.
- 3) Producers of Carrot Grown for Seed who use Capture 2 EC, or cause the product to be used on fields they operate, are required to inform, in writing, conditioners receiving seed produced on treated fields of the product's use. A copy of this labeling is required to be provided to the conditioner by the producer.
- 4) Use of Capture 2 EC according to this labeling is deemed a non-food use.
- 5) Do not apply Capture 2 EC or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.
- 6) All Carrot Grown for Seed treated with Capture 2 EC is to be tagged at the Conditioning Plant "Not for human or animal consumption".

ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA REGISTERED LABEL ARE TO BE FOLLOWED. REFER TO THE EPA REGISTERED LABEL FOR INFORMATION ON CHEMIGATION.

THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF PESTICIDE APPLICATION.

FMC CORPORATION

Agricultural Chemical Group
P.O. Box 1669
Fresno, CA 93717

24(c) Registrant:

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FMC

Code 777

ROUTING AND TRANSMITTAL SLIP

Date

6-26

TO: (Name, office symbol, room number, building, Agency/Post)

Initials

Date

1.

Roy Matheny

2.

Jim A Kerman

3.

Doug Urban

4.

Art

5.

Action

File

Note and Return

Approval

For Clearance

Per Conversation

As Requested

For Correction

Prepare Reply

Circulate

For Your Information

See Me

Comment

Investigate

Signature

Coordination

Justify

REMARKS

B. Feuthrin

24c Oregon

pests on carrots grown for seeds.

Art

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)

Room No.—Bldg.

Phone No.